WHAT IS CLAIMED IS:

1. A plane light source unit comprising:

a plane light pipe including upper and lower surfaces and an incidence side surface which is one of side surfaces between said upper and lower surfaces; and

a linear light pipe including a light supply surface and having a refractive index higher than that of said plane light pipe; and

at least one point light source being disposed on said linear light pipe,

wherein light incident from said at least one point light source is converted into light of a linear light source by said linear light pipe, and

wherein said linear light pipe is disposed so as to make said light supply surface face said incidence side surface of said plane light pipe, and light of said linear light source exiting from said light supply surface so as to be incident on said incidence side surface is converted into light of a plane light source by means of said plane light pipe.

2. A plane light source unit according to claim 1, wherein said plane light pipe includes light output means in one of said upper and lower surfaces to make light incident on said incidence side surface be outputted from the other of said upper and lower surfaces, and said linear light pipe is

constituted by a rod-like member having at least six surfaces, namely, upper and lower surfaces, front and rear surfaces and left and right surfaces and further having an optical path changing means in said front surface to thereby make light incident from at least one point light source at either or both of the left and right surfaces exit from said light supply surface constituted by said rear surface.

3. A plane light source unit according to claim 1, wherein said linear light pipe is made of a rectangular parallelepiped having an optical path changing means in a counter surface opposite to said light supply surface of said linear light pipe, said optical path changing means having slopes inclined in the front-rear direction with respect to a reference plane of said light supply surface.

4. A plane light source unit according to claim 2, wherein said optical path changing means has slopes facing the left or right surface and being inclined in the front-rear direction at an angle in a range of from 35 to 45 degrees with respect to a reference plane of said light supply surface.

5. A plane light source unit according to claim 2, wherein said light output means of said plane light pipe includes slopes facing said incidence side surface at an inclination

angle in a range of from 35 to 45 degrees with respect to a reference plane of a light exit surface on a side opposite to said upper or lower surface having said light output means, and flat surfaces inclined at an inclination angle of not larger than 10 degrees so that the projected area of said flat surfaces on said reference plane is not smaller than 8 times as large as the projected area of said slopes on said reference plane.

6. A plane light source unit according to claim 2, wherein said light output means of said plane light pipe is constituted by a repetitive structure of prismatic structures each having a combination of a short side surface and a long side surface and disposed at intervals of a pitch of from 50 μm to 1.5 mm; each of said short side surfaces is made of a slope facing said incidence side surface at an inclination angle in a range of from 35 to 45 degrees with respect to a reference plane of a light exit surface on a side opposite to said upper or lower surface having said light output means; and each of said long side surfaces is made of a slope inclined with respect to said reference plane so that the inclination angle is in a range of from 0 exclusively to 10 degrees, so that the inclination angle difference is not larger than 5 degrees and the inclination angle difference between adjacent ones of said long side surfaces is not larger than 1 degree on a whole surface of said plane light pipe, and so that the projected area of

the long side surfaces on said reference plane is not smaller than 8 times as large as the projected area of the short side surfaces on said reference plane.

7. A plane light source unit according to claim 5, wherein the projected width of each of said slopes or short side surfaces of said light output means on said reference plane is not larger than 40 μm.

8. A plane light source unit according to claim 2, wherein said light output means of said plane light pipe is constituted by a repetitive structure of prismatic structures disposed at regular intervals of a pitch of from 50 μm to 1.5 mm.

9. A plane light source unit according to claim 2, wherein said light output means of said plane light pipe has ridgelines parallel or inclined with an angle range of ±30 degrees with respect to said incidence side surface.

10. A plane light source unit according to claim 1, wherein said plane light pipe has a refractive index of not higher than 1.54; said linear light pipe has a refractive index of not lower than 1.55; and said plane light pipe and said linear light pipe are connected and integrated with each other.

11. A liquid-crystal display device comprising:

a plane light source unit according to claim 1, and a liquid crystal cell.

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